CLAIMS

1. An email/fax communication system for use in a packet switching network environment including a mail server for storing email messages for transmission thereof, in the form of a fax document, to one or more recipient fax machines, comprising:

    a router for receiving a first email message, in the form of packets, from the mail server, for converting the first email message packets to original fax pages of a fax document, for transmitting the first fax pages to a recipient fax machine and upon failure to successfully transmit at least one of the first fax pages of the fax document to the recipient fax machine, transmitting one or more of the first email message packets to a destination other than the recipient fax machine.

2. An email/fax communication system as recited in claim 1 wherein the first email message includes first envelope information, in the form of packets, having a destination field for identifying the recipient fax machine.

3. An email/fax communication system as recited in claim 2 wherein the router further for transmitting the first fax pages to more than one recipient fax machine and further for re-transmitting the secondary email packets to the more than one recipient fax machine.

4. An email/fax communication system as recited in claim 3 wherein the router further for converting the failed fax pages to secondary email packets.

5. An email/fax communication system as recited in claim 4 wherein the secondary email packets include secondary envelope information having a destination field for identifying recipient fax machines to which the at least one of the fax pages failed to be successfully transmitted.

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6. An email/fax communication system as recited in claim 5 wherein the first envelope information and the secondary email information include identical information when there is one recipient fax machine.

7. An email/fax communication system as recited in claim 2 wherein the first envelope information includes a source field for identifying the source of the first email message and a header field for identifying subject matter of the first email message.

8. An email/fax communication system as recited in claim 2 wherein the destination field of the first envelope information is a "To:" field.

9. An email/fax communication system as recited in claim 5 wherein the secondary envelope information includes a source field for identifying the source of the first email message and a header field for identifying subject matter of the first email message.

10. An email/fax communication system as recited in claim 5 wherein the destination field of the secondary envelope information is a "To:" field.

11. An email/fax communication system as recited in claim 4 wherein the secondary email packets are transmitted back to the mail server for storage thereof and subsequent re-transmission to the router.

12. An email/fax communication system as recited in claim 11 wherein the secondary email packets are transmitted back to the mail server in the order in which the fax pages were to be transmitted to the recipient fax machines prior to failure of the transmission of the fax pages to the recipient fax machines.

13. An email/fax communication system as recited in claim 1 wherein the router further for storing a particular fax page therein until the particular fax page is successfully transmitted to the recipient fax machine.

1   14.   An email/fax communication system as recited in claim 5 wherein the router for

2   further storing the first envelope information until the secondary envelope information is

3   created.

1   15.   A method for transmission of fax documents generated from email messages in a

2   packet switching network environment comprising:

3   receiving a first email message, in the form of packets;

4   converting the first email message packets into first fax pages of a fax

5   document;

6   transmitting the first fax pages to a recipient fax machine;

7   upon failure to successfully transmit at least one of the first fax pages of the

8   fax document to the recipient fax machine, converting the failed fax pages into secondary

9   email packets for re-transmission thereof to the recipient fax machine; and

10   transmitting one or more of the first email message packets to a destination

11   other than the recipient fax machine.

1   16.   A method for transmission of fax documents as recited in claim 15 further comprising

2   the steps of receiving a first envelope information for identification of the source, destination

3   and header information associated with the first email message and storing the first envelope

4   information.

1   17.   A method for transmission of fax documents as recited in claim 15 including the step

2   of transmitting the first email message to multiple recipient fax machines.

1   18.   A computer readable medium having stored therein computer readable program code

2   comprising instructions for performing the following steps:

3   receiving a first email message;

4   converting the first email message packets into first fax pages of a fax

5   document;

6   transmitting the first fax pages to a recipient fax machine;

upon failure to successfully transmit at least one of the first fax pages of the fax document to the recipient fax machine, converting the failed fax pages into secondary email packets for re-transmission thereof to the recipient fax machine; and

transmitting one or more of the first email message packets to a destination other than the recipient fax machine.